AMENDMENT

In the claim:

1. (currently amended) A channel sharing method, comprising:

providing a plurality of channels, wherein each of the channels comprises a time interval of signal transmission;

providing a time slot, wherein a width of the time slot is X times of a maximum value of all the time intervals, and X is a positive number equal or larger than 2; each of the channels is generated by a permutation of at least one repeat time, and the repeat time is M times of the width of the time slot, wherein M is an integer larger than ~~0~~1, and a first time slot of the repeat time comprises a signal, and a maximum time span of the signals in each of the channels is the time interval of each of the channels; and

arranging all the channels so that at least one of the signals in each of the channels is not collided with the signals of the other channels in a worst time delay.

2. (original) The channel sharing method of claim 1, wherein the width of the slot is twice of the maximum value of all the time intervals.

3. (original) The channel sharing method of claim 1, wherein at least one of the channels comprises two repeat times with different lengths.

4. (original) The channel sharing method of claim 1, wherein the step of arranging the channels comprises checking a preset table.

5. (original) The channel sharing method of claim 1, wherein the step of arranging the channels comprises a computation by a program or a software.

6. (currently amended) A channel sharing device, comprising:

a plurality of transmission devices, wherein each of the transmission devices comprises a transmitter and an encoder, wherein the encoder generates a channel with a signal, and the transmitter transmits a wireless signal; and

a plurality of receiving devices, wherein each of the receiving devices comprises a receiver and a decoder, wherein the receiver receives the wireless signal, the decoder decodes the wireless signal to obtain the signal, wherein each of the channels comprises:

a time interval and a time slot, wherein a width of the time slot is X times of a maximum value of the time intervals of the channels, and X is a positive number equal or larger than 2; each of the channels is generated by a permutation of at least one repeat time, and the repeat time is M times of the width of the time slot, wherein M is an integer larger than ~~0~~1, and a first time slot of the repeat time comprises the signal, and a maximum time span of the signals in each of the channel is the time interval of each of the channels; all the channels are arranged so that at least one of the signals in each of the channels is not collided with the signals of the other channels in a worst time delay.

7. (original) The channel sharing device of claim 6, wherein each of the transmission devices corresponds to at least one of the receiving devices.

8. (original) The channel sharing device of claim 6, wherein the encoder comprises a first clock generator and first channel generator, wherein the first clock generator generates a clock signal, and the first channel generator generates the channel comprising the signal.

9. (original) The channel sharing device of claim 8, wherein the first channel generator comprises a preset table, a program or a software.

10. (original) The channel sharing device of claim 6, wherein the decoder comprises a second clock generator and a second channel generator, wherein the second clock generator generates a clock signal, and the second channel generator decodes the wireless signal to obtain the signal.

11. (original) The channel sharing device of claim 10, wherein the second channel generator comprises a preset table, a program or a software.

12. (original) The channel sharing device of claim 6, wherein the width of the slot is twice of the maximum value of all the time intervals.

13. (original) The channel sharing device of claim 6, wherein at least one of the channels comprises two repeat times with different lengths.

14. (original) The channel sharing device of claim 6, wherein the transmitter or the receiver comprises a radio frequency (RF) generator and an antenna.